

Work Order ID 107118

September-23-13 8:02:29 AM

107118

~~DELIMINATED~~
~~REWORK~~
Rev B S B/1/14

Page 1

Item ID: D4680-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Skidtube Assembly

Stop *NS2*

Start Date: 9/23/13 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 9/27/13 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan:  Date: Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D4680

Rev B

0.00

110

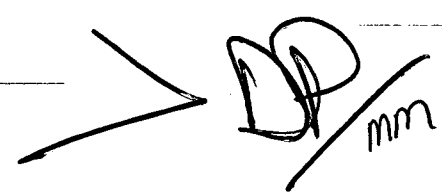
110

CNC Bend 1

CNC Delta 100 Bender

Memo

0.00

1- Bend as per dwg D4680 using bend program D4680 and Folio: 

Verify measurement before cutting.

2- Cut FWD end as per dwg D4680

13-9-26

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Work Order ID 107118

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Page 2

September-23-13 8:02:29 AM

Item ID: D4680-041

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube Assembly

Start Date: 9/23/13

Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/27/13

Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
120	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Cut Aft end as per dwg D4680								
	2-Deburr ends								
	3-Drill Aft & Fwd Cap holes using DT8678 & DT8901								
	4-Locate DT _____ & Drill Ground wire hole on top of Tube.								
	5-Locate DT _____ with #30 cleco in Ground wire hole ,then Pilot Drill all X-Bolt holes using #30" drill.****DO NOT OPEN AFT CAP HOLES*****								
	6-Open ground wire hole .297" (1 at fwd end & 2 at aft end at 21.06" ref.)								
	7- Deburr Rivet holes.								
	8- 2 most fwd x-bolt holes must be laid out manually, open to #30.								
	9-Open Aft & Fwd Cap holes using .208" drill.								
	10- Open X-Bolt holes to .750" <i>xxx Do Not open holes to Section 6-6 2 places xxx</i>								
	11-Deburr holes.								

DP
13-10-1

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%; font-size: small;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 107118

107118

Page 4

September-23-13 8:02:29 AM

Item ID: D4680-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube Assembly

Start Date: 9/23/13 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 9/27/13 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170

170

Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1- Bond web as per Dwg D4680 & QSI 015

A/R 241 Sike Flex Batch: M126469

Exp Date: 14-1-29

start time: 11:45 AM

end time: _____

2- Drill Rivet Holes as per Dwg D4680 using DT ***DO NOT
DRILL RIVET HOLES ON SECTION G-G (TWO PLACES)

3- Seal all faying surfaces using proseal and rivet Doubler as per Dwg D4680.

A/R Proseal Batch: M126010

exp date: 2-14

LET IT CURE FOR 72HRS

START TIME: 11AM

FINISH TIME: _____

4- Rivet doublers as per dwg

5- Ream holes detail E as per dwg, deburr

mm

13/10/16

6- Chamfer holes on section G-G as per dwg

7- Weld spacers into place as per section G-G ***BACK-DRILL***

A/R ALUM. WELDING ROD: M122324

8- Swage x-bolt spacers as per Dwg D4680 and Detail C-C

mm

13/10/16

13-10-7

P10F

13-10-8

BE 13-10-15

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: *RD* Date: *13/11/22*

Work Order: <u>107118</u> Part No. <u>124680-041</u> NCR No. <u>13-3257</u>	DISPOSITION Rework <input checked="" type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube <input checked="" type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input checked="" type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input checked="" type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input checked="" type="checkbox"/>									
Operator <input checked="" type="checkbox"/>	<i>13-10-8</i>	<i>170</i>	<i>1</i>	<i>Accidentally drilled rivet holes 2 places Section G-G</i>	<i>A.P.</i>	<i>Fill rivet holes with weld 8 places</i>	<i>BE</i>	<i>13-10-15</i>	<i>DAS 16 9-89</i>
Material <input type="checkbox"/>						<i>Aluminum Rod M12x324</i>		<i>13-10-16</i>	
Setup <input type="checkbox"/>						<i>Have rivet hole drilling from seg 170 to seg 120</i>		<i>13-10-8</i>	<i>13/11/14</i>
Other <input type="checkbox"/>				<i>RL operator error</i>					
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Work Order ID 107118

107118

Page 5

September-23-13 8:02:29 AM

Item ID: D4680-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube Assembly

Start Date: 9/23/13 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 9/27/13 Req'd Qty: 1.00 *1*

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: Date: Tooling: Date:

Stop *NR2*

QC: Date: SPC (Y/N): Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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8- Trim/Grind flush per QSI 002

mm 13/10/16

175

QC10- Inspect visual per QSI004- ground welds

0.00

DAS
27

175

0.00

13/10/16

QC

Memo

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

DAS
27
9-89

180

0.00

13/10/16

QC

Memo

Quality Control

210

Pressure Wash per QSI005 4.3

0.00

210

0.00

HandFinish

Memo

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

1 HG 13-10-21

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
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		<input type="checkbox"/> Positioned Wrong
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		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Work Order ID 107118

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Page 6

September-23-13 8:02:29 AM

Item ID: D4680-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube Assembly

Start Date: 9/23/13 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 9/27/13 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

Run Start *NR1*

QC: Date: SPC (Y/N): Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220		0.00							
220 221									
Spray Paint	Memo	0.00							
Spray Painting	1- Apply Sherwin Williams Primer as per QSI 005 4.2 and dwg A/R Primer Batch: _____								
	2- Paint two coats of Sherwin Williams Gloss White as per QSI 005 4.2 and dwg A/R Paint Batch: _____								
	3- Apply two coats of Sherwin Williams Clear Coat as per QSI 005 4.2 and dwg A/R Clear Batch: _____								
230	QC14- Inspect Spray Paint	0.00							
230									
QC	Memo	0.00							
Quality Control									

START: 2:20
OPEN T: 3:20
FINISH: 2:50

DAS
34
9-89

PTO →

1 13-11-05

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: <u>107118</u> Part No. <u>124680-041</u> NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input checked="" type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%; font-size: small;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>	13.10.23	220	1	PRIMER WRONG PAINT WRONG	A.P. 13.10.23	USE PRIMER PER Q&S SECTION 4.2.4.3.3 Apply Chen Conversion & Powder coat white per Q&S 4.3.5.1	PK DAS 34 9-89 13/10/24	DAS 16 9-89 13/11/14	DAS 16 9-89 13/11/14
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		
<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

Work Order ID 107118

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~~PRELIMINARY ISSUE~~
Rev B. S B/11/14

107118

Page 7

Item ID: D4680-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Skidtube Assembly

Stop *NS2*

Start Date: 9/23/13

Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/27/13

Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

260

260

HandFinish

HandFinishing

HandFinishing

Memo

0.00

1- Install Wearplate & Ground Wire inserts as per Dwg D4680.

2-Inspect for Foreign objects

3- Install Fwd & Aft caps as per Dwg D4680 and Detail "A" & "B"

A/R 241 Sika Flex Batch: 11127110

Exp Date: 11/29

4- Assemble o'ring to plug as per dwg D3492 and apply o'ring lube

A/R 55-o'ring lube batch: 11121651

5- Wing Walk as per Dwg D4680 and QSI 005 4.4

Batch: 11127140

270

270

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

SMP
13 ILP

1x of all 13/11/13

PTO →

1

DQA:

Date: 13/12/08

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date:

Work Order update only



Work Order: 107118	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS			
Part No. 04680-041		Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>
NCR No.		Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>
		Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	12-11-13	260	1	disassemble - keep parts (plugs/screws) (205) scuff - re powder coat glossy blzch 11.8025 re inspect QC3/5 re-assemble using original parts	A.P. 13.11.13 DAS 34 9-89 13/11/13	QCS → 27 9-89 13/11/14 DAS 16 9-89 13/11/14	DAS 27 9-89 13/11/14	DAS 16 9-89 13/11/14	
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General		
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions
<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set	<input type="checkbox"/> Wrong Stock Pulled
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Other
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence	

Work Order ID 107118

107118

Page 8

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Item ID: D4680-041 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Skidtube Assembly
 Start Date: 9/23/13 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 9/27/13 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	Pick Kit	0.00							
280									
Packaging	Memo	0.00							
Packaging									
290	QC4- 100% Inspect kits for completeness	0.00							
290									
QC	Memo	0.00							
Quality Control									
300	Identify as per dwg & Stock Location: _____	0.00							
300	Packaging	0.00							
Packaging	Memo								
Packaging									

DAS
6
9-89

PP
108935
108936

Release Dwg as a Rev B

DAS
27
9-89

POSITIVE RECALL

EFFECTIVE 130913 AUTH W

RELEASED S DME 13/11/14

Rev B Dwg

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Quality Control

MLJ 1371-19

Picklist Print

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Page 1

Work Order ID: 107118
Parent Item: D4680-041
Parent Item Name: Skidtube Assembly

Start Date: 9/23/13
Start Qty: 1.00

Required Date: 9/27/13
Required Qty: 1.00

3

Comments: IPP REV:A 13.04.16 NEW ISSUE DD VERF:JLM IPP REV:B 13.08.08 PB2 DD
VERF:JLM IPP REV:C 13.09.10 PB3 DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2973 Cross Bolt Spacer		Manufactured	No				Each	70.0000		2		28 13-10-15	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG		24							
				101720		24			2				
				LG002		46							
				80092		9							
				94172		13							
				95876		24							
D3492-055 Plug Assembly		Manufactured	No				Each	12.0000		4		13-10-15	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP001		12		13109041	xcl				
				105599		12							
D2962-150 3.540 Outer Tube, Extrud		Manufactured	No				Each	102.0000		1		13/09/26	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				HALL		102							
				59934		14							
				90871		88			1				
D4681-041 Web Assembly		Manufactured	No				Each	2.0000		1		13-10-7	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG	107119	2			1				
				100238		2							
D4686-1 Spacer		Manufactured	No				Each	0.0000		8		mm 13/10/16	
				107108					7				

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

Picklist Print

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Page 2

Work Order ID: 107118
 Parent Item: D4680-041
 Parent Item Name: Skidtube Assembly

Start Date: 9/23/13

Required Date: 9/27/13

Start Qty: 1.00

Required Qty: 1.00

D4753-1 Manufactured No Each 108.0000
 Doubler

Location	Loc Qty	Loc Code
LG	108	
100674	60	
102087	39	
97771	9	

AELS-1032-130 Y AWS 7-1032-136 Purchased No Each 0.0000

Rivnut

AN3C4A Purchased No Each 3,857.0000

Bolt

Location	Loc Qty	Loc Code
FG	20	
122814	20	
ST512	3837	
125388	2376	
M126105	15	
M126765	1446	

AN960-10L X WASHER, [#10] NAS1149F0332P Purchased No Each 1,618.0000

Location	Loc Qty	Loc Code
FP001	204	
101340	204	
ST504	1414	
101340	1414	

MS20601-AD4W3 Purchased No Each 1,867.0000

Rivet

Location	Loc Qty	Loc Code
ST311	549	
114538	549	
ST506	1318	
124331	600	
124365	718	

16 13-10-8

16

M126105 (3x) all isolos
 all 3 isolos

M1127363

x3 all 5 isolos

M1123900

x5

32 13-10-8

32

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Shop Packet Print

Page 2

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Weld
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Wrong Stock Pulled
			<input type="checkbox"/> Other

Picklist Print

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Page 3

Work Order ID: 107118
Parent Item: D4680-041
Parent Item Name: Skidtube Assembly

Start Date: 9/23/13

Required Date: 9/27/13

Start Qty: 1.00

Required Qty: 1.00

D2965 Manufactured No Each 59.0000
Cap

Location	Loc Qty	Loc Code
FP001	59	
106613	1	
80089	21	
99551	37	

ll 1 131106
x1

AN3C5A Purchased No Each 1,222.0000
Bolt

Location	Loc Qty	Loc Code
FG	5	111127240
122800	5	
ST350	28	
116419	28	
ST512	1189	
124221	730	
125388	459	

ll 2 131106
x2

AN526C1032-10 Purchased No Each 100.0000
Screw

Location	Loc Qty	Loc Code
ST346	100	
125752	100	

ll 2 131406
x2

D2965-3 Manufactured No Each 3.0000
Cap

Location	Loc Qty	Loc Code
FP001	3	1398923
50560	1	
84051	2	

ll 131406
x1

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Shop Packet Print

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NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

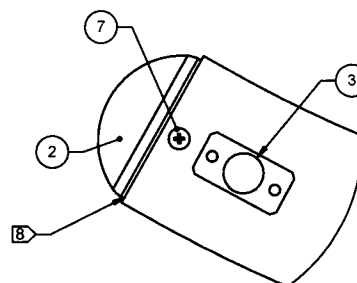
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

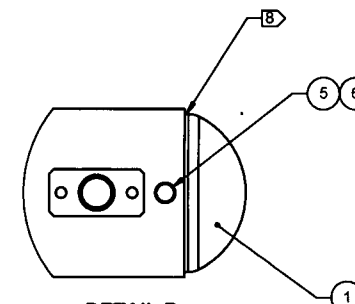
FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

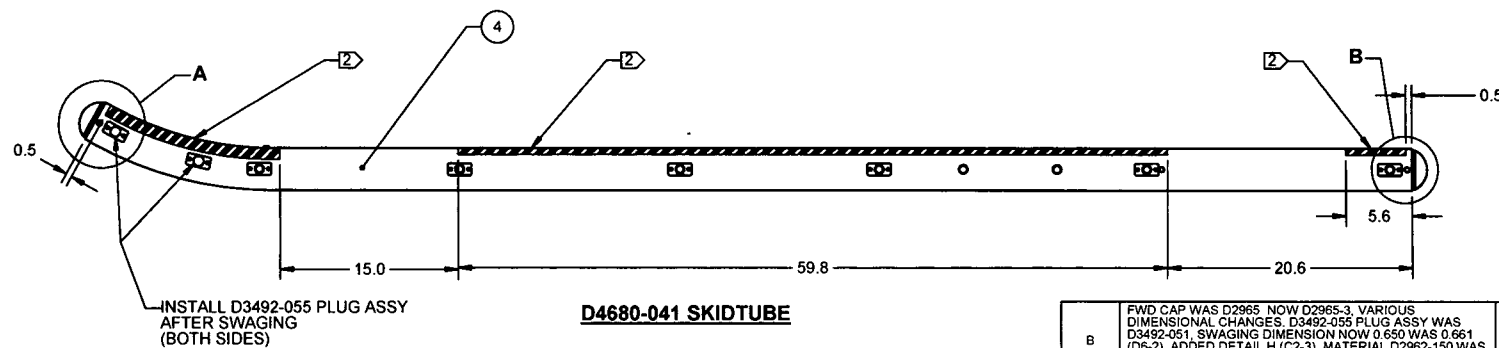
ITEM	QTY -041	P/N	DESCRIPTION
	X	D4680-041	SKIDTUBE
1	1	D2965	CAP
2	1	D2965-3	CAP
3	4	D3492-055	PLUG ASSY
4	1	D4680-043	SKIDTUBE SUB ASSY
5	2	AN3C5A	BOLT
6	2	AN960-10L	WASHER
7	2	AN526C1032-10	SCREW



DETAIL A
SCALE 4X



DETAIL B
SCALE 4X



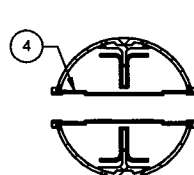
D4680-041 SKIDTUBE

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 1.00 ABOVE CENTERLINE PER QSI 005 4.4.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4680-041" AND B/N PER QSI 044 METHOD 6.4 ON INNER RADIUS OF SKIDTUBE BEFORE INSTALLING D2965 CAP
- 7) WEIGHT: 18.52 lbs
- 8) SEAL FAYING SURFACES WITH SIKAFLEX -241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

REV.	DESCRIPTION	BY	DATE
B	FWD CAP WAS D2965 NOW D2965-3, VARIOUS DIMENSIONAL CHANGES. D3492-055 PLUG ASSY WAS D3492-051, SWAGING DIMENSION NOW 0.650 WAS 0.661 (D6-2), ADDED DETAIL H (C2-3), MATERIAL D2962-150 WAS D2962-131 (A7-3), GROUND HANDLING THRU HOLES NOW WELDED.	AP	13.09.10
A	NEW ISSUE	AP	13.02.13
DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AP		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4680	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE	NTS
DATE	13.09.10	<small>COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

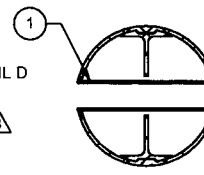
ITEM	QTY -043	P/N	DESCRIPTION
	X	D4680-043	SKIDTUBE SUB ASSY
1	2	D2973	SPACER
2	1	D4680-1	SKIDTUBE
3	1	D4681-041	WEB
4	8	D4686-1	SPACER
5	16	D4753-1	DOUBLER
6	3	AELS-1032-130	INSERT
7	3	AN3C4A	BOLT
8	3	AN960-10L	WASHER
9	32	MS20601AD4W3	RIVET



SECTION C-C (10)
SCALE 4X
8 PL

INSTALL D4686-1 SPACER AS FOLLOWS (8 PL)
AFTER INSTALLING D4753-1 DOUBLERS PER DETAIL D

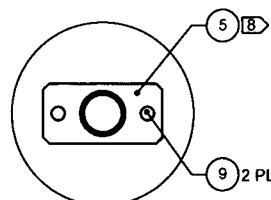
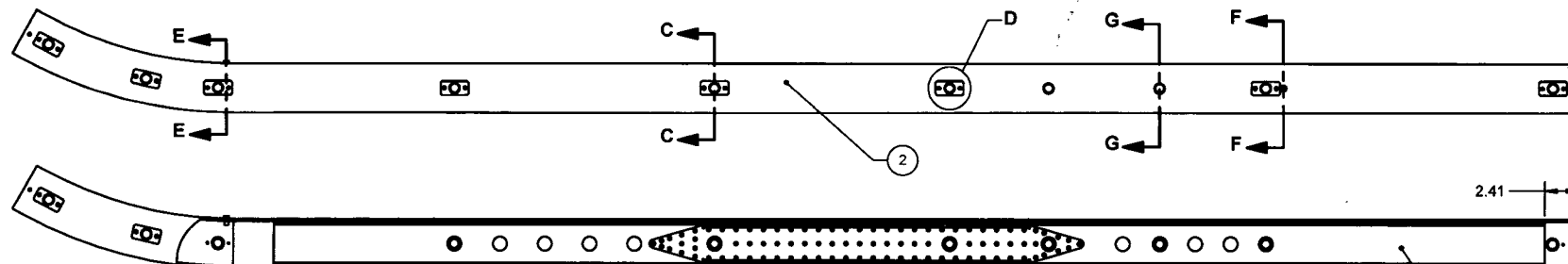
1. INSERT D4686-1 SPACER
2. SWAGE TO $\varnothing 0.650 +0.010/-0.000 \times 1.0$ DEEP PER QSI 002
3. TRIM/GRIND FLUSH PER QSI 002



INSTALL D2973 SPACER AS FOLLOWS (2 PL)

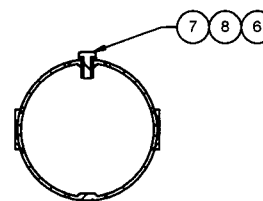
1. CHAMFER HOLE 0.030X45 DEG
2. INSERT D2973 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS $\varnothing 0.625$ DRILL TO REMOVE SPILL OVER

SECTION G-G (11) (B)
SCALE 4X
2 PL

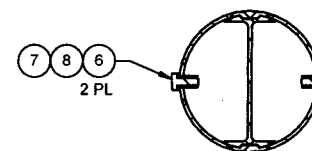


DETAIL D
16 PL (BOTH SIDES)
SCALE 4X

D4680-043 SKIDTUBE SUB ASSY



SECTION E-E
SCALE 2.5X



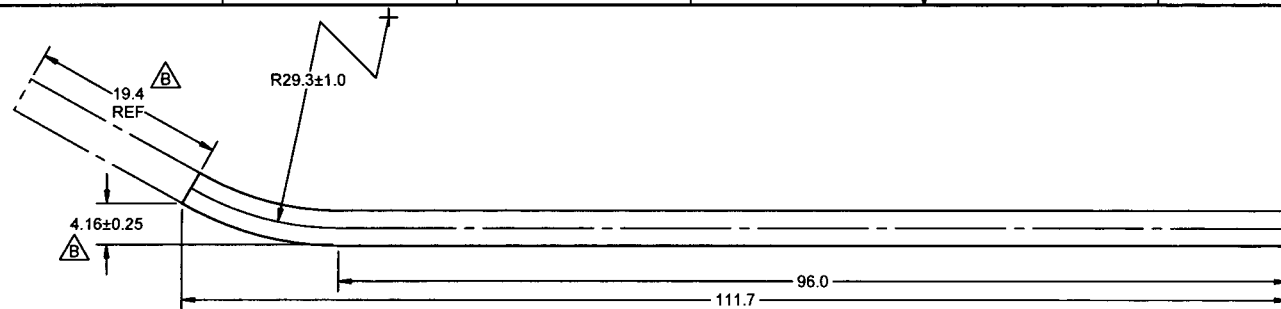
SECTION F-F
SCALE 2.5X

NOTES:

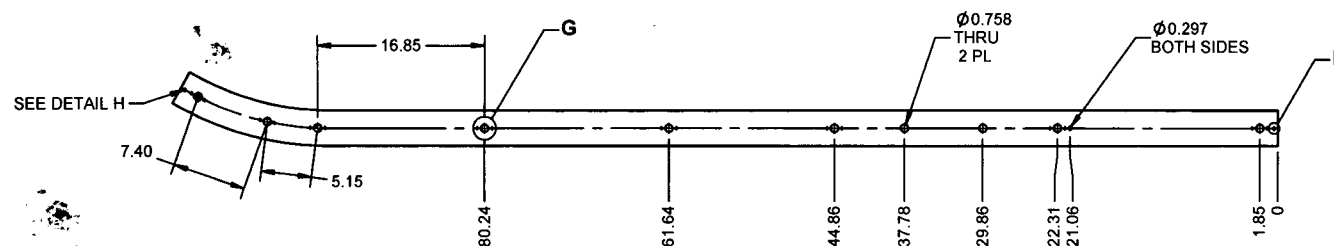
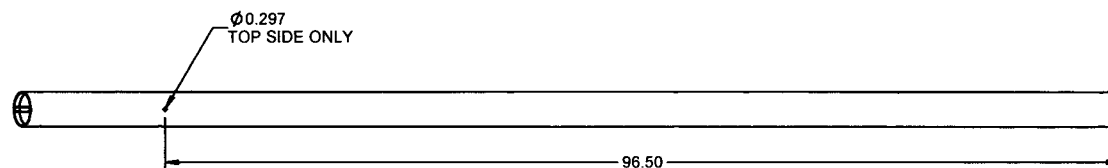
- 1) MATERIAL: N/A
- 2) FINISH: APPLY SHERWIN WILLIAMS PRIMER (CM0483928) PER DART QSI 005 4.2.
PAINT TWO COATS OF SHERWIN WILLIAMS (CM0143603GA) GLOSS WHITE PER DART QSI 005 4.2.
APPLY TWO COATS OF SHERWIN WILLIAMS CLEAR COAT (CM0571080) PER DART QSI 005 4.2.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 17.87 lbs
- 8) SEAL ALL FAYING SURFACES USING PROSEAL 890 B-2 (PRC).
- 9) INSERT D4681-041 WEB INTO D4680-1 SKIDTUBE IN LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX -241/-291 ADHESIVE PER DART QSI 015.
- 10) INSTALL D4686-1 SPACER AFTER INSTALLING D4753-1 DOUBLERS.
- 11) WELDING: PER QSI 004

PRELIMINARY PB4
A.P. 13.09.24

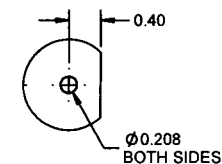
DESIGN	AP	DART AEROSPACE USA, INC.	
DRAWN	AP	KENT, WA	
CHECKED		DRAWING NO.	REV. PB4
MFG. APPR.		D4680	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE	NTS
DATE	13.09.10	<small>COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	



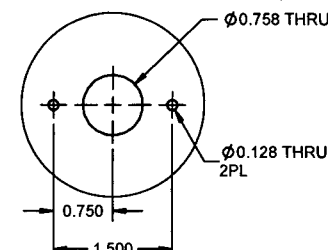
D4680-1 SKIDTUBE BENDING/TRIMMING DETAIL



D4680-1 SKIDTUBE DRILLING DETAIL



DETAIL H
SCALE 8X
2 PL



DETAIL G
SCALE 8X
8 PL

NOTES:

- 1) MATERIAL: MAKE FROM D2962-150 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 11.36 lbs

DESIGN	AP	DART AEROSPACE USA, INC.	
DRAWN	AP	KENT, WA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4680	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE	NTS
DATE	13.09.10	<small>COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

NO. 332

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliot
Job #: 107118
Part #: A4680-041
Description: Skid tube
Welding Process: Tig[☒] Mig[]
Base material: Alum.
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual:	pass[<input checked="" type="checkbox"/>]	fail[]
Incomplete Penetration:	pass[<input checked="" type="checkbox"/>]	fail[]
Incomplete Fusion:	pass[<input checked="" type="checkbox"/>]	fail[]
Cracks:	pass[<input checked="" type="checkbox"/>]	fail[]
Overlap (cold lap)	pass[<input checked="" type="checkbox"/>]	fail[]
Undercut:	pass[<input checked="" type="checkbox"/>]	fail[]
Pin holes:	pass[<input checked="" type="checkbox"/>]	fail[]
Porosity (surface):	pass[<input checked="" type="checkbox"/>]	fail[]
Coloration:	pass[<input checked="" type="checkbox"/>]	fail[]
Burn through:	pass[<input checked="" type="checkbox"/>]	fail[]

DAS
10
9-09

Qualifier David David Date of Test Coupon 13.10.17
Welder Barclay Elliot Date of Test Coupon 13-10-17

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Linda Lacelle

From: Peggy McDonald
Sent: November-12-13 5:35 PM
To: Sian Willems
Cc: Linda Lacelle; Diana Hagen; David Shepherd; Nigel Forbes; Bill Beckett
Subject: EC145 Training Skidtubes for Evaluation

Importance: High

Hi Sian,

EADs is going to get me a no charge PO but that will take time. They have asked that I proceed with the shipping directly to Pax River.

Please ship qty 2 x EC145 Training skidtubes (Glossy Black) to the following address. The P/N may change because of the gloss black. The skidtubes need to be at PAX River for early next week (very time sensitive) and after speaking with Nigel, we are hoping to ship them out this Friday.

Eugene CZOSEK is our POC at Pax River - Make sure the labels have Eugene's name all over it, if his name is not obvious at their receiving end, they might get lost. Now a days, unannounced packages going into a military base can get quarantined and will be hard for us to track down.

ATTENTION : Eugene R Czosek
Sikorsky Aerospace Maintenance
22777 Saufley Road Bldg 1480
Patuxent River, MD, 20670
301-995-4016

240-585-0052 Business Cell

I am still waiting on a Tax ID or IRS number.

Thanks for your help on this. Give me a call if you have any questions. The ones in stock are white and the NAVY won't accept them - Nigel is aware and is making arrangements to have a set of gloss black ready for Friday.

Peggy

-----Original Message-----

From: Nigel Forbes
Sent: Tuesday, November 12, 2013 7:51 AM
To: Bill Beckett; Peggy McDonald
Cc: Sian Willems
Subject: RE: Pax river

Good morning,
No, not yet. I haven't seen an order for this

-----Original Message-----

From: Bill Beckett
Sent: November-12-13 6:48 AM
To: Nigel Forbes; Peggy McDonald
Cc: Sian Willems
Subject: RE: Pax river

Nigel - has an order been entered into Intuitive?
Peggy - any suggestion how best we follow up in Salesforce?
Bill

-----Original Message-----

From: David Shepherd
Sent: Monday, November 11, 2013 7:05 PM
To: Peggy McDonald
Cc: Bill Beckett; Alain Madore; Mike Petsche; Diana Hagen; Steve Ghaleb; Sian Willems; Nigel Forbes
Subject: RE: Pax river

Peggy,

Further to my email below, 8110-3 from FAA DER received today ... Release the hounds.

Regards,
David

-----Original Message-----

From: David Shepherd

Sent: November-11-13 12:06 AM

To: Peggy McDonald

Cc: Bill Beckett; Alain Madore; Mike Petsche; Diana Hagen; Steve Ghaleb; Sian Willems; Nigel Forbes

Subject: RE: Pax river

Peggy,

Good News ... Your persistence pays off again.

We are just waiting for the 8110-3 from our DER for the latest changes, but should have that by Wednesday at the latest.

Then I'd be OK with shipping these.

I will call you about providing Engr support for the install.

I am interested in getting data and measurements to sort out the EC145 basket install issues at the same time.

Regards,

David

-----Original Message-----

From: Peggy McDonald

Sent: November-08-13 1:06 PM

To: David Shepherd

Cc: Bill Beckett; Alain Madore; Mike Petsche; Diana Hagen; Steve Ghaleb; Sian Willems; Nigel Forbes

Subject: RE: Pax river

Importance: High

Hi David,

Looks like the US Navy has approved the installation of the DART training skidtubes on an EC145 located at Pax River. The aircraft had a hard landing and needs the complete landing gear to be replaced. EADS will be contacting me next week with the expected delivery date of the crosstubes, so we can co-ordinate our efforts around that. We do know that the aircraft has to be rolled out and engines started no later than Nov 26.

Nigel has confirmed, he will have a set ready for shipping Monday.

David, as far as certification, are we ok to ship to Pax River next week? We also need to have technical representation onsite for the install. I plan on making this trip but will need tech support. Let me know your thoughts on this.

On another note, they had a concern about compatibility with a Meeker step. I have a call into Cal and EADs was also to get us more details. If it is the step on the Meeker website, the modification may be to the crosstubes not the skidtubes.

My contact, who manages all logistics will return to the office on Monday - I expect that I will have the information required to ship no later than mid-week.

Ideally, we go ahead and ship the parts, then travel to Pax River to be present during the installation.

Peggy

-----Original Message-----

From: Nigel Forbes

Sent: Wednesday, September 25, 2013 3:49 PM

To: Peggy McDonald; Mike Petsche

Cc: Bill Beckett; Alain Madore

Subject: RE: Pax river

Hi Peggy,

Thank you the update, we will proceed to manufacture new ones a.s.a.p.

Nigel

-----Original Message-----

From: Peggy McDonald

Sent: September-25-13 3:20 PM

To: Nigel Forbes; Mike Petsche

Cc: Bill Beckett; Alain Madore

Subject: RE: Pax river

Hi Nigel,

The latest from EADS on the 2 x EC145 training skidtubes for Pax River is we have 2 - 4 wks to deliver. Sounds like the Navy is very interested. EADs just has to get some paperwork out of the way.

As soon as I hear more I will let you know.

My recommendation is we move forward with the production of two new skidtubes and we only supply our very best to the US Navy for this evaluation.

Peggy

-----Original Message-----

From: Nigel Forbes

Sent: Tuesday, September 24, 2013 2:49 PM

To: Bill Beckett
Cc: Peggy McDonald
Subject: RE: Pax river

Bill,

The EC145 skidtubes (float also) are in prelim. There's a needed change to the drawing for the wearplate hole location. So the repaired ones are now obsolete (if we use them they will have an obsolete hole in them). Drawings are being rushed but I don't see how we can produce two set of skidtubes (no tooling for them yet) in just a few days. Where do we stand we the possible orders?

-----Original Message-----

From: Bill Beckett
Sent: September-20-13 6:44 AM
To: Peggy McDonald; Nigel Forbes
Subject: RE: Pax river

Peggy - Good news.

Nigel - as discussed please have the two EC145 Skidtubes with training Wearplates ready to leave when we get the go ahead. This is a big potential breakthrough.

Thanks,

Bill

-----Original Message-----

From: Peggy McDonald
Sent: Friday, September 20, 2013 5:11 AM
To: Bill Beckett
Subject: Pax river

Opportunity for 2 luh training skidtubes looks promising - nothing firm yet but sounds like it is moving in the right direction. I will keep you posted. Off to the 0500 breakfast club :)

Sent from my iPhone

Linda Lacelle

From: David Shepherd
Sent: November-12-13 5:46 PM
To: Peggy McDonald; Sian Willems
Cc: Linda Lacelle; Diana Hagen; Nigel Forbes; Bill Beckett
Subject: RE: EC145 Training Skidtubes for Evaluation

Per QSI 005, part number should be changed to D145-762-113GB (for Gloss Black).

Regards,
David

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Cc: Linda Lacelle; Diana Hagen; David Shepherd; Nigel Forbes; Bill Beckett
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Subject: RE: Pax river

Hi Peggy,

Thank you the update, we will proceed to manufacture new ones a.s.a.p.

Nigel

-----Original Message-----

From: Peggy McDonald

Sent: September-25-13 3:20 PM

To: Nigel Forbes; Mike Petsche

Cc: Bill Beckett; Alain Madore

Subject: RE: Pax river

Hi Nigel,

The latest from EADS on the 2 x EC145 training skidtubes for Pax River is we have 2 - 4 wks to deliver. Sounds like the Navy is very interested. EADS just has to get some paperwork out of the way.

As soon as I hear more I will let you know.

My recommendation is we move forward with the production of two new skidtubes and we only supply our very best to the US Navy for this evaluation.

Peggy

-----Original Message-----

From: Nigel Forbes

Sent: Tuesday, September 24, 2013 2:49 PM

To: Bill Beckett

Cc: Peggy McDonald

Subject: RE: Pax river

Bill,

The EC145 skidtubes (float also) are in prelim. There's a needed change to the drawing for the wearplate hole location. So the repaired ones are now obsolete (if we use them they will have an obsolete hole in them). Drawings are being rushed but I don't see how we can produce two set of skidtubes (no tooling for them yet) in just a few days. Where do we stand we the possible orders?

-----Original Message-----

From: Bill Beckett

Sent: September-20-13 6:44 AM

To: Peggy McDonald; Nigel Forbes

Subject: RE: Pax river

Peggy - Good news.

Nigel - as discussed please have the two EC145 Skidtubes with training Wearplates ready to leave when we get the go ahead. This is a big potential breakthrough.

Thanks,

Bill

-----Original Message-----

From: Peggy McDonald

Sent: Friday, September 20, 2013 5:11 AM

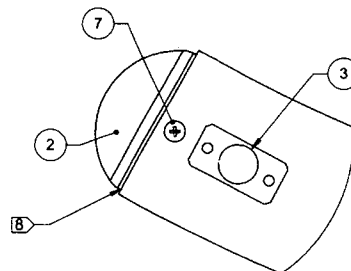
To: Bill Beckett

Subject: Pax river

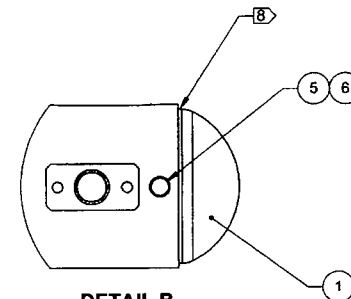
• Opportunity for 2 luh training skidtubes looks promising - nothing firm yet but sounds like it is moving in the right direction. I will keep you posted. Off to the 0500 breakfast club :)

Sent from my iPhone

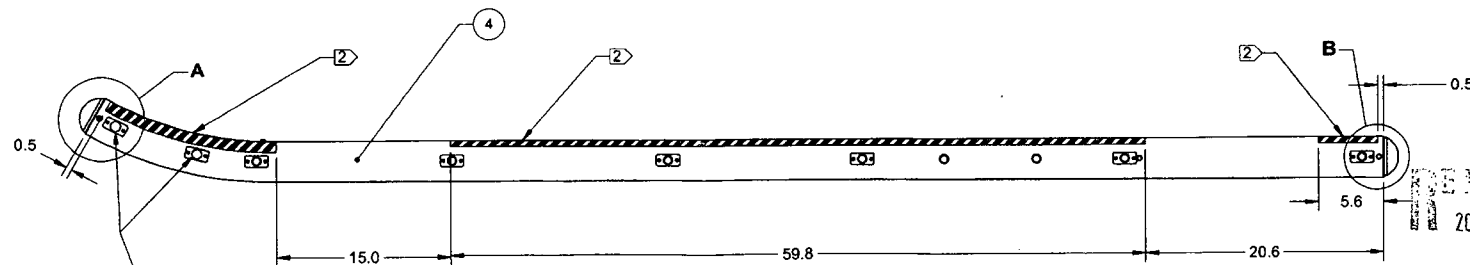
ITEM	QTY .041	P/N	DESCRIPTION
	X	D4680-041	SKIDTUBE
1	1	D2965	CAP
2	1	D2965-3	CAP
3	4	D3492-055	PLUG ASSY
4	1	D4680-043	SKIDTUBE SUB ASSY
5	2	AN3CSA	BOLT
6	2	AN960-10L	WASHER
7	2	AN526C1032-10	SCREW



DETAIL A
SCALE 4X



DETAIL B
SCALE 4X



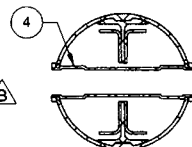
D4680-041 SKIDTUBE

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PAINT TOP SURFACE OF SKIDTUBE WITH MIL-W-5044 ANTI-SKID PAINT (WING WALK) AS INDICATED TO 1.00 ABOVE CENTERLINE PER QSI 005 4.4.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4680-041" AND B/N PER QSI 044 METHOD 6.4 ON INNER RADIUS OF SKIDTUBE BEFORE INSTALLING D2965 CAP
- 7) WEIGHT: 18.56 lbs
- 8) SEAL FAYING SURFACES WITH SIKAFLEX -241/-291 OR PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT

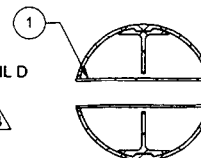
B	FWD CAP WAS D2965 NOW D2965-3, VARIOUS DIMENSIONAL CHANGES. D3492-055 PLUG ASSY WAS D3492-051. SWAGING DIMENSION NOW 0.650 WAS 0.661 (D6-2). ADDED DETAIL H (C2-3). MATERIAL D2962-150 WAS D2962-131 (A7-3). GROUND HANDLING THRU HOLES NOW WELDED, ADDED SECTION G-G (D3-2)	AP	13.09.10
A	NEW ISSUE	AP	13.02.13
REV.	DESCRIPTION	BY	DATE
DESIGN	AP	DART AEROSPACE USA, INC.	
DRAWN	AP	KENT, WA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4680	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SKIDTUBE	NTS
DATE	13.09.10	COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

ITEM	QTY	P/N	DESCRIPTION
	X	D4680-043	SKIDTUBE SUB ASSY
1	2	D2973	SPACER
2	1	D4680-1	SKIDTUBE
3	1	D4681-041	WEB
4	8	D4686-1	SPACER
5	16	D4753-1	DOUBLER
6	3	AELS-1032-130	INSERT
7	3	AN3C4A	BOLT
8	3	AN960-10L	WASHER
9	32	MS20601AD4W3	RIVET



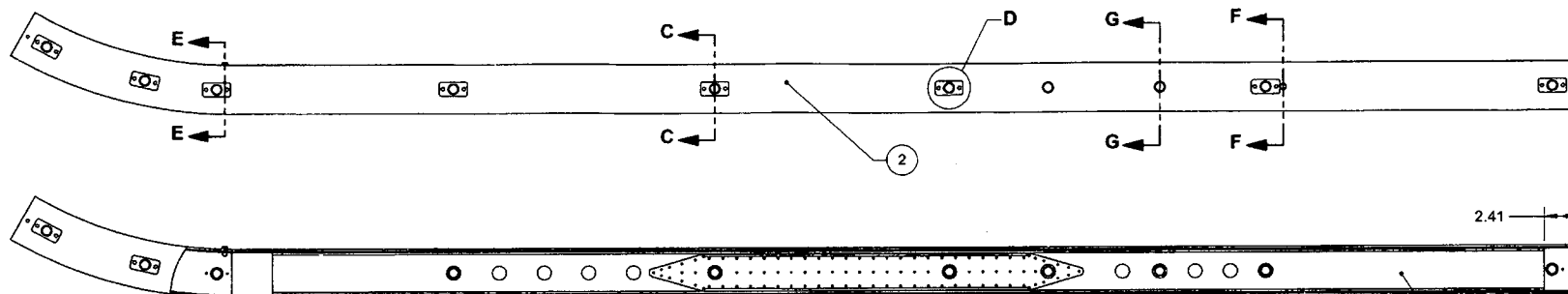
SECTION C-C
SCALE 4X
8 PL

INSTALL D4686-1 SPACER AS FOLLOWS (8 PL)
AFTER INSTALLING D4753-1 DOUBLERS PER DETAIL D
1. INSERT D4686-1 SPACER
2. SWAGE TO $\varnothing 0.650 +0.010/-0.000 \times 1.0$
DEEP PER QSI 002
3. TRIM/GRIND FLUSH PER QSI 002

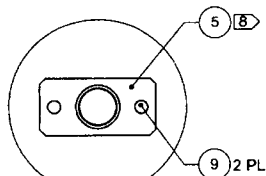


SECTION G-G
SCALE 4X
2 PL

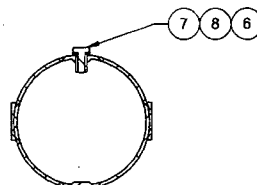
INSTALL D2973 SPACER AS FOLLOWS (2 PL)
1. CHAMFER HOLE 0.030×45 DEG
2. INSERT D2973 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS $\varnothing 0.625$ DRILL TO REMOVE SPILL OVER



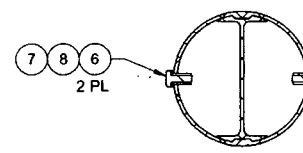
D4680-043 SKIDTUBE SUB ASSY



DETAIL D
16 PL (BOTH SIDES)
SCALE 4X



SECTION E-E
SCALE 2.5X



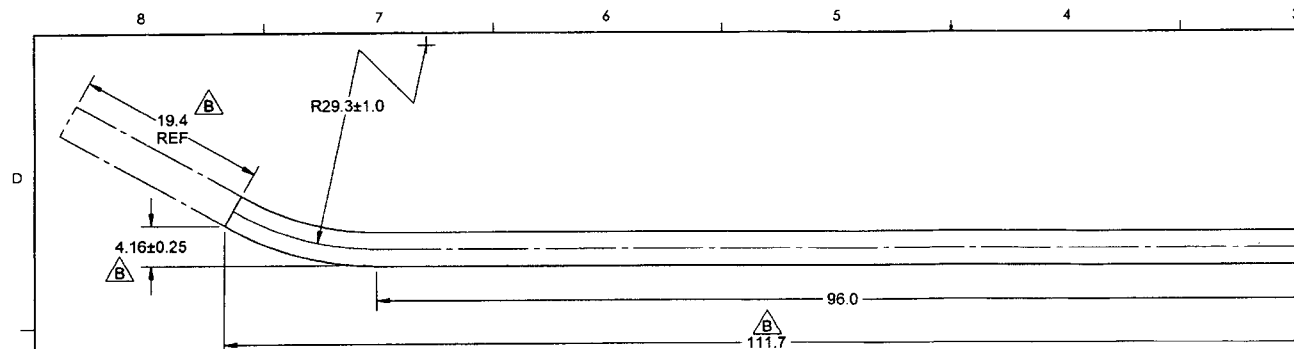
SECTION F-F
SCALE 2.5X

NOTES:

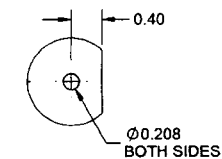
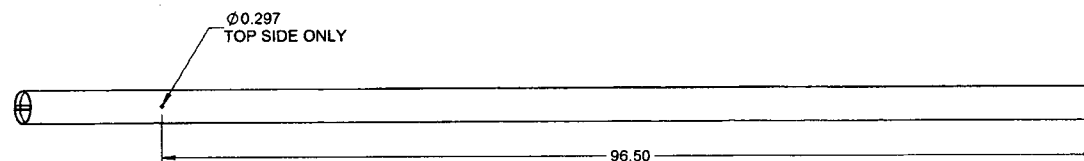
- 1) MATERIAL: N/A
- 2) FINISH: APPLY CHEMICAL CONVERSION COATING PER DART QSI 005 4.1 PRIOR TO INSTALLING D4681-041 WEB. POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 17.91 lbs
- 8) SEAL ALL MATING SURFACES USING PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT.
- 9) INSERT D4681-041 WEB INTO D4680-1 SKIDTUBE IN LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX -241/-291 ADHESIVE PER DART QSI 015.
- 10) INSTALL D4686-1 SPACER AFTER INSTALLING D4753-1 DOUBLERS.
- 11) WELDING: PER QSI 004

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CHECKED	ASS	DRAWING NO.	REV. B
MFG. APPR.	DS	D4680	SHEET 2 OF 3
APPROVED	MP	TITLE	SCALE
DE APPR.		SKIDTUBE	NTS
DATE	13.09.10	<small>COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

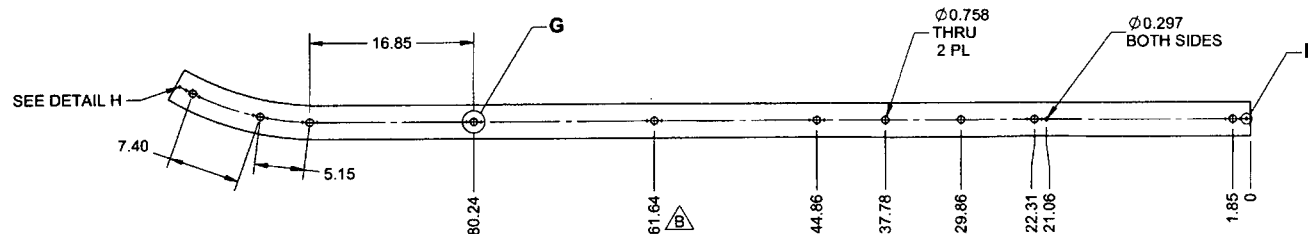
RELEASED
2013-11-13



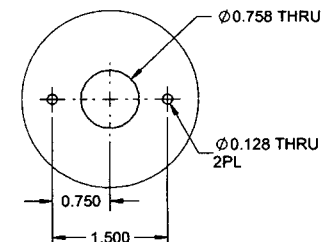
D4680-1 SKIDTUBE BENDING/TRIMMING DETAIL



DETAIL H
SCALE 8X
2 PL



D4680-1 SKIDTUBE DRILLING DETAIL



DETAIL G
SCALE 8X
8 PL

NOTES:

- 1) MATERIAL: MAKE FROM D2962-150 EXTRUSION
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 11.36 lbs

DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AP		
CHECKED	ASS	DRAWING NO. D4680	REV. B
MFG. APPR.			SHEET 3 OF 3
APPROVED		TITLE SKIDTUBE	SCALE NTS
DE APPR.		COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	
DATE	13.09.10		

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